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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,334	03/09/2001	David Homol	4015-826	7343
24112	7590	03/09/2005	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			LIU, SHUWANG	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/803,334	Applicant(s) HOMOL ET AL.	
	Examiner Shuwang Liu	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-24 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/04/2004 regarding the rejection of claim 1 under 35 USC 102 have been fully considered but they are not persuasive. The Examiner has thoroughly reviewed Applicant's arguments but firmly believes that the cited reference reasonably and properly meets the claimed limitation as rejected. The provisional double patent rejection is withdrawn as resulted by the filed terminal disclaimer. Furthermore, the rejection of claims 2, 4, 7, 8, 11, 14, 15, 19, 22 and 23 are withdrawn.

Applicant's argument – The applicant argues “as cast in the limitations of claim 1, cycle slip detection is a function of the phase detector's reset signal, one of the PLL's input signals, and a corresponding one of the control signals” and “the examiner is correct in the Fig. 2 of the '902 patent discloses cycle slip detector 315 and 320, and further discloses a reset input (RN inputs) of the two D flip-flops 400 and 402 comprising phase detectors 315 and 320, and it is axiomatic that their corresponding cycle slip detector function cannot be “based” on the reset signal within the meaning of the instant application's claims.”

Examiner's response – Applicants are reminded that the Examiner is entitled to give the broadest reasonable interpretation to the language of claims. So the Examiner considers “based” to be “to form or make a base for” interrupting” within the broad meaning of the term. The slip indication signal (375) generated by cycle slip detector 315 is directly based on one (338) of the first and second input signals and the

corresponding one (350) of the first and second PLL control signals. However, the one (350) of the first and second control signals is based on the reset signal (output from 404). Although the reset signal does not directly input to the cycle slip detector 315, the input 350 of the slip detector is based on the reset signal. Therefore, the reset signal is the base to form the slip indication signal (375). The Examiner is not limited to Applicant's definition, that is, the reset signal "serves as an input to cycle slip detector", which is not specifically set forth in the claims. *In re Tanaka et al.*, 193 USPQ 139, (CCPA) 1977.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Klemmer et al. (US 6,265,902).

As shown in figures 1-3, Klemmer et al. discloses:

a circuit for use in a phase-locked loop (PLL) comprising:

a phase detector (310) comprising:

first (400) and second (402) input circuits to generate first and second PLL control signals responsive to clock edges in first and second input signals (335 and 340), respectively; and

a reset circuit (404) to generate a reset signal based on said first and second PLL control signals (350 and 355) to reset said first and second input circuits (column 8, lines 52-67); and

a cycle slip detector (315 and 320) for each one of said first and second input circuits, each said cycle slip detector generating a slip indication signal based on said reset signal, a corresponding one of said first and second input signals, and a corresponding one of said first and second PLL control signals (column 7, line 24-column 12, line 63).

Allowable Subject Matter

4. Claims 11-24 are allowed.
5. Claims 2-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach and suggest a circuit comprising wherein each the cycle slip detector comprises slip detection logic to generate slip indication signal when a clock edge in the corresponding one of the first and second input signals is received during the reset signal.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is 571 272-3036. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shuwang Liu
Primary Examiner
Art Unit 2634

March 2, 2005